(a) roviding an antigen-adjuvant compos . comprising the antigen and a cytokine adjuvant selected from the group consisting of IL-1α, IL-12, IL-15, IL-18 and combinations thereof; and

(b) administering said antigen-adjuvant composition intramucosally to the vertebrate subject in a manner such that initial contact occurs in mucosal tissue of the vertebrate subject, whereby an immune response is elicited.

65. (New) The method of claim 64, wherein the antigen-adjuvant composition further comprises IL-1α in combination with at least one other cytokine.

66. (New) The method of claim 65, wherein the IL-1α is present in the antigen-adjuvant composition in an amount ranging from about 10 to about 1000 micrograms per kilogram body weight of the vertebrate subject.

67. (New) The method of claim 66, wherein the IL-1α is present in the antigen-adjuvant composition in an amount ranging from about 50 to about 500 micrograms per kilogram body weight of the vertebrate subject.

68. (New) The method of claim 67, wherein the IL-1α is present in the antigen-adjuvant composition in an amount ranging from about 60 to about 200 micrograms per kilogram body weight of the vertebrate subject.

69. (New) The method of claim 64, wherein the antigen-adjuvant composition further comprises IL-12 in combination with at least one other cytokine.

70. (New) The method of claim 64, wherein the antigen-adjuvant composition further comprises IL-15 in combination with at least one other cytokine.

71. (New) The method of claim 64, wherein the antigen-adjuvant composition further comprises IL-18 in combination with at least one other cytokine.

72. (New) The method of claim 64, wherein said manner of administration is selected from the group consisting of intranasal administration, intravaginal administration, and intrarectal administration.

73. (New) The method of claim 64, wherein the antigen-adjuvant composition is administered once a week over a period of one to three weeks.

74. (New) The method of claim 64, wherein the antigen-adjuvant composition is administered once every two weeks over a period of two to six weeks.

75. (New) The method of claim 64, wherein the antigen-adjuvant composition is administered once during a first week, and the method further comprises the step of administering the antigen only once a week over a period of one to two weeks following the first week.

76. (New) The method of claim 64, wherein the antigen-adjuvant composition is administered once during a first biweekly period, and the method further comprises the step of administering the antigen only once every two weeks over a period of two to four weeks following the first biweekly period.

77. (New) The method of claim 64, wherein the immune response comprises a systemic immune response.

78. (New) The method of claim 64, wherein the immune response comprises a mucosal immune response.

79. (New) The method of claim 64, wherein the immune response comprises a cell-mediated immune response.

80. (New) The method of claim 64, wherein the antigen-adjuvant composition further comprises a pharmaceutically acceptable vehicle and the antigen-adjuvant composition is carried therein.

81. (New) The method of claim 80, wherein the pharmaceutically acceptable vehicle is selected from the group consisting of distilled water and phosphate-buffered saline.

82. (New) The method of claim 64, wherein the antigen-adjuvant composition is free of mineral adjuvants, preservatives or stabilizers, and wherein the antigen and adjuvant are not conjugated together.

83. (New) The method of claim 64, wherein the vertebrate subject is a mammal.

84. (New) The method of claim 80, wherein the mammal is a human.